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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/855,904 | 05/15/2001 | Jong-Ho Kim | A34239 | 1155 |
| 21003 | 7590 | 09/20/2006 | EXAMINER | |
| BAKER & BOTTS 30 ROCKEFELLER PLAZA 44TH FLOOR NEW YORK, NY 10112 | | | NGUYEN, STEVEN H D | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2616 | |

DATE MAILED: 09/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) |
|------------------------------|------------------------|---------------------|
| | 09/855,904 | KIM, JONG-HO |
| Examiner | Art Unit | |
| Steven HD Nguyen | 2616 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 26 June 2006.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-4 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) Claim(s) _____ is/are allowed.
6) Claim(s) 1-4 is/are rejected.
7) Claim(s) _____ is/are objected to.
8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____.

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
5) Notice of Informal Patent Application
6) Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/26/06 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Antonio (US 6519456) in view of Przelomiec (USP 5915212) and Hwang (USP 6532249).

Regarding claim 1, Antonio discloses a base transceiver station (Fig 1, Ref 12 and 14) in a mobile communication system comprising a BTS main processing unit for generating a control command to control one BTS (Fig 11, Ref 70 is a base station controller for generating a command to control BTS or Fig 3, ref 52 or Fig 5, ref 112 or Fig 6, ref 208) a multi-rate channel unit for processing an inter-channel communication, each channel having a different data rate (Fig 5, Ref 102 and Fig 7, ref 118); a signal transformation unit for transforming and modulation of an input signal which is received from the multi rate channel unit (Figs 5-6 discloses received signal from the multichannel “ref 246” is upconversion “ref 266” and modulating “ref 252”); and a wireless unit for wireless communication with a mobile station (Fig 5, Ref Antenna). However, Antonio fails to disclose radio frequency switches to dynamically select one of a plurality of band-pass filter to provide a selective forward-link bandwidth operation. In the same field of endeavor, Hwang discloses radio frequency switch (Fig 2, Ref 222) to dynamically select one of a plurality of band-pass filters (Fig 2, Ref 225) to provide a selective bandwidth operation for forward-link (Fig 2, Ref is used to select one of ref 225-227 to receive input signal from Ref 222) and Przelomiec discloses radio frequency switches (Fig 4, Ref 68 and 74) to dynamically select one of a plurality of band-pass filters (Fig 4, Ref 70 and 72, See col. 7, lines 4-40) to provide a selective bandwidth operation for forward-link.

Since, Antonio suggests that a CDMA system can be implemented with a plurality of bandwidths such as 1.25 to 5 Mhz and Hwang suggests that a transmitter must implement a method for allowing a system to dynamic select one of filter that matches with bandwidth operation by using a frequency switch based on a control signal. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to implement a

plurality of band pass filters to dynamically select a operation bandwidth as disclosed by Przelomiec's system into Antonio's system based on the suggestion of Hwang. The motivation would have been to provide a dynamic system by providing a plurality of frequency bandwidths in order to expand a capacity of the user.

Regarding claim 2, Antonio discloses the wireless unit includes three transmitting frequency units and three receiving frequency units (Fig3, Ref 46).

Regarding claim 3, Antonio discloses upconversion and downconversion. However, Antonio fails to fully disclose the signal transformation unit includes analog up/down converter and digital up or down converter. However, the examiner takes an official notices that a method and advantage of using analog up/down converter and digital up or down converter are well known an expected in the art at the time of invention was made to implement these devices into the system's Antonio, Hwang and Przelomiec in order to transform the signals.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Antonio, Przelomiec and Hwang as applied to claim 1 above, and further in view of Button (USP 5872823).

Antonio discloses the multi-rate channel unit includes a transmitting integrated circuit for processing an input signal, a receiving integrated circuit for processing an output signal (Fig 5, Ref 114 and Fig 7, Ref 126 are ASICs). However, Antonio Przelomiec and Hwang fail to disclose a HDLC controller for controlling a HDLC communication and a controlling software block for performing a pre-reserved program and transmit it to each device. In the same field of endeavor, Sutton discloses the ASICs for processing the signals (Fig 2, Ref 218 and 220) into HDLC frame and a controller (Fig 2, Ref 105), See col. 6, lines 19-36 and controlling software

block for performing a pre-reserved program and transmit it to each device (it is well known in the art to use a storage for storing the software and loading the software into the ASICs).

Since, Antonio suggests the use of FIRM for coupling to the router bus. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to implement HDLC adapter between the channel processing module with the router using a HDLC adapter as disclosed by Sutton's system into the system of Antonio, Przelomiec and Hwang. The motivation would have been to prevent corrupting the data or clock signals.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven HD Nguyen whose telephone number is (571) 272-3159. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571) 272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Steven HD Nguyen
Primary Examiner
Art Unit 2616
13 September 2006